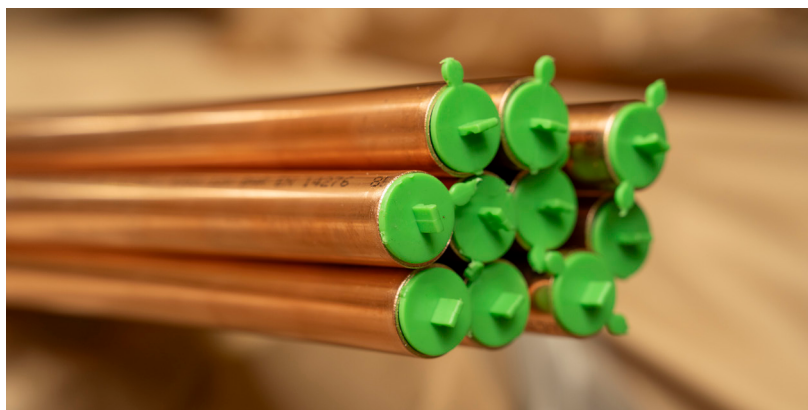


K65 Refrigeration Tube Data Sheet



K65 Refrigeration Tube	Straight Length
Applications	High Pressure Air Conditioning and Refrigeration Piping Systems, CO ₂ Supermarket Refrigeration, Heating and Solar Engineering
Market Segment	Commercial and Industrial
Outside Diameter	3/8" - 2.5/8" (9.52 mm - 66.67 mm)
Wall Thickness	0.51 mm - 4.46 mm (0.020" - 0.176")
Material	Wieland K65, CuFe2P (CW107C)
Material Condition	R300 (annealed), R420 (hard, as drawn)
Material Standard	EN 12735-1
Pressure Standard	EN 14276
Maximum Operating Pressure	80, 120 or 130 bar by class
Service Temperature Range	-196 °C to 150 °C
Product Marking	Inkjet Durable Marking to EN12735-1
Delivery Condition	Capped
Form of Supply	Wooden Cases, Bundles
Inner Surface Quality	Clean and Smooth, Carbon Content ≤ 0.38 mg/dm ²
Freedom from Defects	Each tube eddy current, hydrostatic or pneumatic tested (EN 12735-1, 8.6)
Guarantee	75 Years (See website for full T&Cs)

Material Mechanical Properties

Material Designation	Tensile strength min. (N/mm ² MPa)	Elongation min. (%)	Hardness (Indicative) HV5 VPN
R300 (annealed)	300	25	85 - 115
R420 (hard, as drawn)	420	5	min. 130

Material Composition

Element	Min (%)	Max (%)
Copper (Cu)	Rem.	-
Iron (Fe)	2.100	2.600
Phosphorus (P)	0.015	0.150
Zinc (Zn)	0.050	0.200
Lead (Pb)	-	0.030
Others, total	-	0.200

Physical Properties

Property	Value
Density	8.91 g/cm ³
Service temperature range	-196 °C to 150 °C
Inner surface carbon content	<= 0.38 mg/dm ²
Magnetic response	Slightly magnetic
Melting range	1,080 - 1,090 °C
Thermal conductivity	260 W/(m.K)
Coefficient of thermal expansion	17.6 x 10 ⁻⁶ /K

For more details, please refer to our website or contact us by e-mail at technical@lawtontubes.co.uk

Fabrication & Joining

Group	Property	Rating
Forming	Capacity for being cold worked	Excellent
Forming	Capacity for being hot worked	Fair
Forming	Machinability (CuZn39Pb3 = 100 %)	25 %
Joining	Hard soldering (brazing)	Excellent
Joining	Soft soldering	Excellent
Joining	Inert gas shielded arc welding	Excellent
Joining	Gas welding	Excellent
Joining	Resistance welding (butt weld)	Fair
Surface treatment	Polishing, mechanical	Good
Surface treatment	Polishing, electrolytic	Fair
Surface treatment	Electroplating	Good

Dimensions and Maximum Operating Pressure

O.D. (Inches)	Wall (Inches)	Gauge (SWG)	MOP (bar)	Min. Bending Radius (mm)
3/8"	0.022	24	120	43
3/8"	0.024	23	130	43
1/2"	0.020	25	80	52
1/2"	0.030	22	120	52
1/2"	0.032	21	130	52
5/8"	0.025	23	80	63
5/8"	0.037	20	120	63
5/8"	0.041	19	130	63
3/4"	0.030	22	80	75
3/4"	0.047	18	120	75
3/4"	0.050	18	130	75
7/8"	0.035	20	80	98
7/8"	0.054	17	120	98
7/8"	0.059	17	130	98
1.1/8"	0.047	18	80	102
1.1/8"	0.070	15	120	102
1.1/8"	0.076	15	130	102
1.3/8"	0.058	17	80	140
1.3/8"	0.085	14	120	140
1.3/8"	0.092	13	130	140
1.5/8"	0.069	15	80	140
1.5/8"	0.101	12	120	140
1.5/8"	0.109	12	130	140
2.1/8"	0.089	13	80	Not defined
2.1/8"	0.132	10	120	Not defined
2.1/8"	0.142	9	130	Not defined
2.5/8"	0.176	7	130	Not defined